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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,065	06/20/2001	Yoshiaki Hirano	35.C15463	1688

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NEW YORK, NY 10112

EXAMINER

MILIA, MARK R

ART UNIT	PAPER NUMBER
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2625

MAIL DATE	DELIVERY MODE
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07/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/884,065

Applicant(s)

HIRANO, YOSHIAKI

Examiner

Mark R. Milia

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 5/4/07 and has been entered and made of record. Currently, claims 16-29 are pending.

Claim Rejections - 35 USC § 112

2. Applicant's amendment to claims 22 and 26 to delete reference to the terms "portrait print sheet" and "landscape print sheet" has overcome the rejection set forth in the previous Office Action. Therefore, the rejection has been withdrawn.

Response to Arguments

3. Applicant's arguments filed 5/4/07 have been fully considered but they are not persuasive.

The applicant asserts that Sato (US 6809834) does not teach or suggest "wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus," as recited in claims 16, 19, 22, and 26. The examiner respectfully disagrees as Sato does disclose,

Art Unit: 2625

or at the very least suggest, the above-mentioned features. Particularly, Sato states that through the use of a DMA scheme and DMA controller, continuous transfer of image data from the pager memory 8 to the plotter 2, from the pager memory 8 to the vertical/horizontal conversion 9, and from the vertical/horizontal conversion 9 to the pager memory 8 occurs continuously (see column 2 lines 47-55). Therefore, there must be separate buses that allow image data transfer between the three memory areas to occur continuously and as such, simultaneously. Further, DMA transfer are known to utilize separate channels than those used by the CPU and it is further known that DMA transferring allows the CPU to execute other processes as the CPU is not needed for the actual data transfer. Thus, Sato teaches, or at the very least suggests, that "said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus," as recited in claims 16, 19, 22, and 26.

Therefore, the rejection of claims 16-29, as set forth in the previous Office Action, is maintained and repeated in this Office Action.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 16-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato (US 6809834).

Regarding claim 16, Sato discloses a printer comprising: a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory (see Fig. 1 (7) and column 2 lines 30-33), and an engine unit having a second memory for storing the image data received from said control unit and a print engine for printing the image data stored in the second memory (see Fig. 1 (2), column 3 lines 48-61, and column 4 lines 25-44), and wherein said transfer unit includes a third memory for storing the image data with the first orientation read from the first memory, and reads image data from said third memory as image data with a second orientation for performing image rotation and transfers the image data with the second orientation to said second memory (see Fig. 1 (8), column 2 lines 34-35, 47-55, and 61-64, column 3 lines 31-40, column 4 lines 52-59, and column 5 lines 4-20), and wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus (see column 2 lines 47-55, column 3 lines 31-40 and 54-61, and column 4 lines 25-44 and 52-59).

Regarding claim 19, Sato discloses a control method carried out in a printer that comprises a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a

Art Unit: 2625

transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory, and an engine unit having a second memory for storing the image data received from the control unit and a print engine for printing the image data stored in the second memory (see Fig. 1, column 2 lines 30-33, column 3 lines 48-61, and column 4 lines 25-44) said method comprising: a storing step of storing the image data with the first orientation read from the first memory in a third memory (see column 2 lines 30-35), a controlling step of reading the image data from the third memory as image data with a second orientation for performing image rotation (see column 2 lines 40-55, column 3 lines 30-40, and column 5 lines 4-20), and transferring the read image data with the second orientation to the second memory (see column 3 lines 30-40, column 4 lines 25-44 and 52-59, and column 5 lines 4-20), and wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus (see column 2 lines 47-55, column 3 lines 31-40 and 54-61, and column 4 lines 25-44 and 52-59).

Regarding claim 22, Sato discloses a printer comprising: a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory (see Fig. 1 (7) and column 2 lines 30-33), and an engine unit having a second memory for storing the image data received from said control unit and a print engine for printing the image data stored in said second memory (see Fig. 1 (2), column 3 lines 48-61, and column 4

lines 25-44), and wherein said transfer unit includes a third memory for storing the image data with the first orientation read from said first memory, and in accordance with a print sheet, reads the image data from said third memory as image data with a second orientation and transfers the read image data with the second orientation to said second memory or reads the image data from said third memory as image data with the first orientation and transfers the read image data with the first orientation to said second memory (see Fig. 1 (8), column 2 lines 34-35, 47-55, and 61-64, column 3 lines 31-40, column 4 lines 52-59, and column 5 lines 4-20), and wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus (see column 2 lines 47-55, column 3 lines 31-40 and 54-61, and column 4 lines 25-44 and 52-59).

Regarding claim 26, Sato discloses a control method carried out in a printer that comprises a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory, and an engine unit having a second memory for storing the image data received from the control unit and a print engine for printing the image data stored in the second memory (see Fig. 1, column 2 lines 30-33, column 3 lines 48-61, and column 4 lines 25-44), said method comprising: a storing step of storing the image data with the first orientation read from the first memory in a third memory (see column 2 lines 30-35), a transferring step of, in accordance with a print sheet, reading the image

Art Unit: 2625

data from the third memory as image data with a second orientation and transferring the read image data with the second orientation to the second memory or reading the image data from the third memory as image data with the first orientation and transferring the read image data with the first orientation to the second memory (see column 3 lines 30-40, column 4 lines 25-44 and 52-59, and column 5 lines 4-20), and wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus (see column 2 lines 47-55, column 3 lines 31-40 and 54-61, and column 4 lines 25-44 and 52-59).

Regarding claims 17, 20, 23, and 27, Sato further discloses a parallel interface for connecting said control unit and said engine unit to each other (see Fig. 1).

Regarding claims 18, 21, 24, and 28, Sato further discloses wherein said transfer unit includes a plurality of the third memories and wherein said transfer unit transfers one body of image data from one of the plurality of third memories to said second memory, while other image data from said first memory is stored in another of the plurality of third memories (see column 4 lines 25-44).

Regarding claims 25 and 29, Sato further discloses wherein said engine unit informs said control unit whether the rotation is required (see column 3 lines 31-40).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

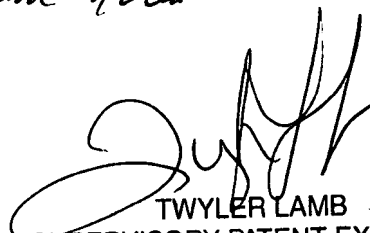
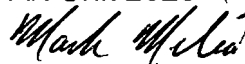
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached at (571) 272-7406. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRM

Mark R. Milia
Examiner
Art Unit 2625



TWYLER LAMB
SUPERVISORY PATENT EXAMINER